

Valentine National Wildlife Refuge

1992

Annual Narrative Report

Introduction

Valentine National Wildlife Refuge (NWR) was established August 4, 1935, pursuant to the Migratory Bird Conservation Act by Executive Order 7142 “as a breeding ground for migratory birds and other wildlife.” The refuge is part of a complex administered from Fort Niobrara NWR.

Valentine NWR lies in the heart of the Nebraska Sandhills; a unique region which contains the largest remaining stands of mid and tall native prairie in North America. Of the 71,516 acres in the refuge, approximately 49,000 acres are grassy, undulating sand dunes; 10,000 acres are shallow lakes and marshes; and 13,000 acres are sub-irrigated meadows. The total acreage provides habitat for migrating and nesting waterfowl, other migrating birds, and native/resident wildlife. The refuge headquarters is located on Hackberry Lake, 18 miles south of Valentine, Nebraska, on US Highway 83 and then 13 miles west and south on State Spur 16B.

Review and Approvals

Valentine National Wildlife Refuge

Valentine, Nebraska

Annual Narrative Report

Calendar Year 1992

_____	_____	_____
Refuge Manager	Date	Refuge Supervisor
Date		

A. Highlights

American burying beetles, an endangered species, were found on the refuge for the first time.

Carp were found for the first time in the Marsh Lakes, the best waterfowl habitat on the refuge.

Fort Niobrara/Valentine NWR Complex Project Leader Bob Ellis retired.

B. Climatic Conditions

Weather conditions during January were mild--especially on wildlife species. The monthly high temperature was 67 on January 31 and the low was -8 on January 15 which was the only temperature below zero. Only 4 daily maximum temperatures were below freezing while 10 daily maximum temperatures were above 50 degrees. Refuge lakes are beginning to open up.

Only 0.65 inches precipitation was received during January when five inches of snow was received on the 7th. and 8th.

Weather conditions were unseasonably mild for February with only four days of maximum day-time temperatures that did not exceed freezing (three of which were 31 degrees). Refuge lakes were half open by February 4 and mostly frozen over again, with a thin coat on February 11; but, were essentially open by mid-month. The maximum daily temperature was 72 degrees on February 29 and the minimum temperature was 11 degrees occurring on February 8. Precipitation was received on 7 occasions totaling 0.6 inches for the month. The greatest amount was 0.33 inches received on February 18 along with 3 inches of snow.

The Valentine NWR weather station recorded March as starting out with the warmest temperatures recorded during the month--the first three days were over 70°F. The monthly maximum temperature was 75°F on March 3 and the monthly minimum temperature was 11°F on March 11. Total precipitation for the month was 2.73 inches with 0.89 inches on March 4 being the greatest daily amount recorded. Six inches of snow was recorded on March 9 and two inches on March 18.

A new record high of 97°F was set at the Hackberry Weather Station for the month of April replacing the old high of 96°F set in 1980 and 1989. The monthly minimum temperature was 15°F on April 1. Measurable precipitation was recorded on April 15 and 18 totaling 0.67 inches.

Weather conditions remained dry during May. A total of 0.71 inches of precipitation was recorded at the Hackberry Weather Station - net open pan evaporation was 8.40 inches during the month. Temporary wetland dried up and elevations of permanent wetlands decreased. The maximum temperature recorded was 96°F on May 1 and the minimum temperature was 30°F on May 26. The freezing temperatures affected vegetation mostly in low lying areas with cattail, bush morning glory, poison ivy, leadplant, and flowering forbs (wallflowers and puccoons) showing the most effect - some warm season grasses were somewhat affected.

Weather conditions were generally cool and wet during June. A total of 7.36" of precipitation was recorded at the Hackberry Weather Station during June--exceeding the annual total through May by 2" and bringing the total precipitation for the year to 12.72". Measurable precipitation was received on 14 days and 3 other days a trace was recorded. Some temporary wetlands again held water during the month. The maximum temperature recorded was 84°F on June 18 and the minimum temperature was 43°F degrees on June 6.

Weather conditions were generally cool and wet for July. A total of 5.07" of precipitation was recorded at the Hackberry Weather Station bringing the total precipitation for the year to 17.79". Measurable precipitation was received on 14 days and 3 other days a trace was recorded. Net moisture (precipitation less evaporation) for the month was 0.60" compared to -5.62" recorded in 1991. The greatest amount was 1.46" received on July 3 which was accompanied by a hail storm. Hail stones up to 3/4" and hail stone drifts >2 ft. were observed. Vegetation was severely affected in an area approximately one-half mile in width and nearly 12 miles in length starting from the Tower area in the George Wiseman Natural Area and continuing east and

terminating in South Marsh Lake; however, hail occurred in a greater area. Within the area where vegetation was damaged smaller passerine, young-of-the upland gamebird and some marsh-water bird populations were adversely affected. Temporary wetland elevations continued to increase during the month. The maximum temperature recorded was 90 on July 27 and the minimum temperature was 46 degrees on July 3.

Weather conditions were generally cool and wet for August. A total of 3.10" of precipitation was recorded at the Hackberry Weather Station bringing the total precipitation for the year to 20.89". Measurable precipitation was received on 8 days with a trace recorded on one day. Net moisture (precipitation less evaporation) for the month was 0.27" compared to -4.04" recorded in 1991. The greatest amount was 0.70" received on August 5 and 25. The maximum temperature recorded was 91°F on August 8 and the minimum temperature was 39°F degrees on August 27.

Weather conditions were generally mild and dry during September. A total of 1.37" of precipitation was recorded at the Hackberry Weather Station bringing the total precipitation for the year to 22.26". Measurable precipitation was received on 4 days with a trace recorded on two days. The greatest amount of precipitation received was 0.61 on September 7. The maximum temperature recorded was 89 degrees on September 30 and the minimum temperature was 30 degrees on September 28. Effective moisture (precipitation less net evaporation) for the month was -2.25". The annual total, to date, is 11.78" greater than documented during 1991.

Weather conditions were generally mild during October. A total of 0.79" of precipitation was recorded at the Hackberry Weather Station bringing the total precipitation for the year to 23.05". Measurable precipitation was received on five days with a trace recorded on four days. The greatest amount of precipitation received was 0.43" on October 7. The maximum temperature recorded was 90°F on October 1 and 2 and the minimum temperature was 20°F on October 16. Effective moisture (precipitation less net evaporation) for the month was -0.64".

A total of 0.14" of precipitation was recorded at the Hackberry Weather Station during December bringing the 1992 annual precipitation total to 23.71". Effective moisture for the year (precipitation minus open pan evaporation) was 6.94" indicating an above average year. During December measurable precipitation was received on two days with a trace recorded on two days. Precipitation was received on December 12-14 with 2 inches of snow. The maximum temperature recorded was 51°F on December 15 and the minimum temperature was -11°F on December 31.

C.. Land Acquisition

2. Easements

Considerable time was spent during the year making visits to FmHA

inventory lands for the possible placement of easements. Action taken on each property is listed below.

Haskel Property, Brown County. This property is about 4,000 acres in size and has 94.4 acres of wetlands on it. Most of the wetlands are located in one meadow. Easements were recommended for all wetlands on the property. Isolated wetlands will be protected from drain and fill. The main wetland complex will be fenced out and managed with a haying and grazing plan that was developed by us in conjunction with the Soil Conservation Service. The plan allows limited haying and grazing and will provide good cover for wildlife.

This area is about 300 acres in size and will provide an excellent area for wildlife including nesting waterfowl.

Larsen Farm, Knox County. This property has one large artificial wetland fed by two small streams. The riparian areas are small wooded canyons that lead into the artificial wetland. The total property is about 560 acres in size and is in a mix of cropland and pasture land. An easement of about 280 acres, which did not include cropland, was recommended. Due to the difficulty in fencing and administration a type "A" easement with no restrictions on haying or grazing was recommended.

Wagner Property, Knox County. This 720 acre property is a mix of cropland, hayland, and pasture. A small creek flows through and is fed by three small tributaries that start on the property. The tributaries have small artificial wetlands on them. Part of the property was recommended for an easement with controlled grazing.

This 1/4 section is already fenced. The other part of the easement will have no restrictions on haying and grazing. The SCS office in Knox County was contacted and we have started work on the grazing plan.

DeKay Property, Knox County. This property was reviewed and we recommended no easement. The property had only 2 artificial wetlands on it and neither contained water. Looking at the maps it seems that upstream land owners had built ponds that prevent water from coming down.

Johnson Property, Keyapaha County. We already have an easement on this property. A further review was required under the new Farm Bill but as we already have the maximum allowable easement on the property no additions were possible. The local FmHA office is interested in transferring our easement portion to FWS in fee title and was checking with the State Office at years end.

Tower Wildlife Management Area, Brown County. This former easement was transferred to FWS in fee title. FmHA still holds surrounding land in inventory and a further review was required under the new Farm Bill. At a meeting with the local FmHA staff an addition of 400 acres adjacent to our fee title land was discussed. This is contingent upon approval from the State Office to change some of the land classification from cropland to pasture land. The soils are all sand and should have never seen the plow in the first place. We had not heard back from the State Office at years end. Also pending is the access easement to our fee title land. This was not completed when the transfer was done. We have requested that the public also be allowed access to the wildlife management area.

Foxley Corporate Farms, Wheeler County. This easement is not an FmHA property but part of a settlement between the Environmental Protection Agency and the landowner. We may end up being the easement manager. A draft easement prepared by Enhancement was reviewed. Recommended changes included managing a portion of the upland for nesting cover and making the landowner responsible for possible contaminant monitoring and cleanup. The land has five large wetlands (277.2 total acres) located in CRP. The groundwater was contaminated as a result of farming activities and the area may not pass a contaminant review.

5. Research and Investigations

On February 29, Biologist McDaniel assisted CSC research personnel remove hatchling painted turtles from over-wintering nest sites. These turtles are part of research being conducted to determine the over-winter survival strategy of hatchling turtles exposed to sub-zero temperatures.

Graduate Student, Jim Anderson, University of Nebraska-Omaha, completed his M.S. Thesis re: breeding bird populations in relation to grazed grasslands on the refuge v.s. private land. Total species was higher on the private grazed lands reflecting the occurrence of horned larks and long-billed curlews; however, species that require larger quantities of grassland were more common on grazed refuge grasslands.

Drs. Mary and Gary Packard - CSU, Dr. Kirk Miller - Franklin and Marshall College, PA, Dr. Geoffrey Birchard - George Mason University, VA, and Dr. Wm. Gutzke - Memphis State University were on Valentine NWR during the month collecting snapping and painted turtle eggs for on-going hatching physiology research re: environmental conditions during incubation and hatchling size and survival. Several snapping and painted turtle nests were "wired" in the field to reduce the incidence of nest destruction by mammalian predation and pocket gophers. Hatchling turtles from these nests

will be removed in August for comparison with laboratory hatched hatchlings. Also, ornate box turtles were removed for laboratory research and will be returned in August along with the hatchling snapping and painted turtles.

Dr. G. Packard, CSU and Dr. K. Miller, Franklin & Marshall College were on Valentine NWR during the month to retrieve snapping and painted turtle eggs before they hatched in the field. Very low nest mortality was observed this year after modifications were made to the protective wire mesh to prevent mammalian predation. However, weather conditions did not cooperate - research was based upon hot, dry conditions for incubation of the eggs in the nest and documentation of the size of hatchling turtles.

Biologist McDaniel set up a meeting with James R. Fajt, Ph.D. candidate, Auburn University, for a presentation on a new technique for carp control. The presentation took place in the R.O. and generated considerable interest. The technique is presently tested in the field under an experimental use permit. The idea is to use fish feeders placed in lakes with carp to feed first a non-toxic feed to carp and then after the carp are accustomed to the feed to add poison to it.

National Ecology and Research Center biologists worked throughout the year gathering information on occurrence and abundance of reptiles, amphibians, birds, and small mammals on the refuge. The study will establish a baseline for the refuge and take several years to complete.

D. PLANNING

4. Compliance with Environmental and Cultural Resource Mandates

The checklist for the care of museum property was completed and forwarded to the RO. Our facility meets few of the standards and couldn't without quite an expenditure of funds. It may be better to transfer the limited number of items to another facility rather than spend the kind of money needed to care for them properly.

Section 7 evaluations for hunting programs at Valentine NWR were completed. No major changes are anticipated in hunting programs for the coming year.

E. Administration

1. Personnel

1. Robert. M. Ellis	Refuge	Manager	(retired	May	30)
GS13PFT Complex					
Royce R. Huber	Refuge	Manger	(started	Nov	30)
GS13PFT Complex					
2. Len McDaniel	Wildlife	Biologist		GS11PFT	
Valentine					
3. Jim Sellers	Supv	Refuge Op	Specialist		

	GS11PFT	Complex	
4. Mark Lindvall		Refuge Op. Specialist	
	GS11PFT	Complex	
5. Kathy McPeak		Refuge Op. Specialist	
	GS09PPT	Fort	
6. Larry Vaughn		Biological Technician	
	GS08PFT	Valentine	
7. Mark Purdy		Engin. Equip Operator	WG10PFT
	Complex		
8. Dave Kime		Maintenance Worker	WG08PFT
	Valentine		
9. Bill Turner		Maintenance Worker	WG08PFT
	Fort		
10. Glen Beaman		Maintenance Worker	WG08PFT
	Fort		
11. Casey McPeak		Maintenance Worker	WG08PFT
	Fort		
12. Mary Ayers		Refuge Assistant	GS06PFT
	Complex		
13. Kristen Kesterson		Office Auto Clerk (quit Aug)	
	GS04PFT	Complex	
	Bridgette Thornton	Office Auto Clerk (stated Nov)	
	GS04PFT	Complex	
14. Ronnie Sanches		Refuge Manager COOP Student	
15. John Segar		Fire Mgmt Officer (started Feb)	GS11PFT
	Complex		
16. Bill Waln		Range Tech	GS04TFT
17. Rich Sterry		Range Tech	GS06TFT
18. Bill Langer		Range Tech	GS04TFT
19. Bill Mathews		Range Tech	GS04TFT
20. Kevin Kvame		Range Tech	GS04TFT
21. Steve Breth		Range Tech	GS04TFT
22. Todd Borszich		Range Tech	GS04TFT
23. Frank Egelhoff		Range Tech	GS02TFT
24. Laura Eddy		Range Tech	GS02TFT
25. Bob Sedlmager		Range Tech	GS02TFT
26. Don McWethy		Range Tech	GS05TFT
27. Terry Nelson		Range Tech	GS04TFT

Ronnie K. Sanchez reported for duty on February 10 as a Student Trainee (Biological Science). Ronnie previously worked for the Huron Wetland Acquisition Office in Huron, SD.

John S. Segar reported for duty on February 10 as the Fire Management Officer. John transferred from the National Park Service in Tupelo,

Mississippi. This transfer was a promotion for John from a GS-9 Fire Management Officer to a GS-11 Fire Management Officer.

Richard (Rich) I. Sterry from Presho, SD was rehired as a Range Technician, GS-6 effective April 13, 1992. This is Rich's second year with the complex

William (Bill) W. Waln of Kilgore was rehired on April 20 as a Range Technician, GS-4. This will be Bill's 5th year working as a Range Technician on the complex. Bill is a student at Peru State College in Peru, Nebraska.

William (Bill) J. Langer from Moorhead, MN was hired as a Range Technician, GS-04, effective May 4, 1992. Bill obtained his B.S. degree with a major in Zoology from the North Dakota State University, November 22, 1991. Bill has worked previously as a summer volunteer on the Tamarac NWR in Rochert, MN and as a seasonal Fishery Aide with the North Dakota Game & Fish Department in Jamestown, ND.

William (Bill) A. Matthews from Iowa City, IA was hired as a Range Technician, GS-4, effective May 11, 1992. Bill received his B.S. degree in Fisheries & Wildlife Biology from the Iowa State University, May 18, 1991. Bill has worked as a Fisheries Lab Technician and a Agricultural Lab Technician at the Iowa State University and as a Foreign Fisheries Observer with Frank Orth and Associates in Bellevue, Washington.

Kevin R. Kvame from Mission, SD was rehired as a Range Technician, GS-4, effective May 26, 1992. Kevin has worked as a Range Technician for the complex two previous seasons (04/17/90 - 10/31/90 and 03/10/91 - 11/02/91). Kevin has received his A.A. in Natural Resources this year from the Sinte Gleska College in Rosebud, SD.

Robert (Bob) M. Ellis retired from the U.S. Fish and Wildlife Service effective May 30, 1992. A retirement party was held the evening of May 15th at Fort Niobrara NWR. Roast pig, Sellers' cowboy beans, two salads, and a multiple selection of deserts made up the menu.

Maury Wright from the Regional Office presented Bob with a finished set of Longhorn horns. Jim Sellers did the presentation of the gifts from everyone in general. A silver belt buckle with the Fish & Wildlife Service emblem, his name and dates of service engraved on it was ordered, though not available for the retirement party. A large turnout of people showed for the occasion and a good time was had by all.

Personnel: Steven (Steve) M. Breth from Ft. Collins, CO was hired as a Range Technician, GS-04, effective June 1, 1992. Steve is a student from Colorado State University working towards a degree in wildlife biology.

Todd J. Borszich from Valentine, NE was hired as a Range Aid, GS-02 effective June 1, 1992. Todd had worked previously for the Ft. Niobrara-Valentine NWR Complex as a YCC enrollee.

Frank L. Egelhoff also from Valentine, NE was hired as a Range Aid, GS-02 effective June 8, 1992. Frank had worked previously for the Ft. Niobrara-Valentine NWR Complex as a YCC enrollee in 1990. Frank is a student at the University of Wyoming working towards an architectural engineering degree.

Laura M. Eddy from Emporia, KS was hired as a Range Aid, GS-3. Laura is a student at the Emporia State University taking courses in environmental biology, range management, and soils. Laura has work experience as a research assistant with the Emporia State University in prairie plant studies.

Robert (Bobby) J. Sedlmajer from Mission, SD was hired effective June 15, 1992 as a Range Aid, GS-2. Bobby will obtain his AAS in December from the Sinte Gleska College in natural resources. Donald G. McWethy was hired as a Range Technician, GS-05, effective July 28, 1992. Don came from Kalamazoo, Michigan. He was previously employed with the Park Service as a "professional seasonal fire fighter" with extensive fire experience as a member of the Alpine I.A. Hotshot crew and as a seasonal fire fighter supervisor.

Robert J. Sedlmajer resigned effective 07-16-92 to accept a permanent position with the Rosebud Sioux Tribes Office of Water Resources in South Dakota.

Frank L. Egelhoff, Range Aid, resigned effective 08-12-92 to return to college at the University of Wyoming.

Todd J. Borszich, Range Aid, resigned effective 08-14-92 to attend classes in the School of Mines in South Dakota.

Steven M. Breth, Range Technician, resigned effective 08-21-92 to return to Colorado State classes.

Laura M. Eddy, Range Aid, resigned effective 08-21-92 to return to classes at Emporia State University in Kansas.

Ronnie K. Sanchez, Student Trainee, was placed in a LWOP status as he returned to Las Cruces, New Mexico to attend college classes at the New Mexico State University.

Kristen Kesterson, Office Automation Clerk, worked her last day at the complex on August 28, 1992. Kristen resigned as she intends to be a full-time Mother when her child makes her/his appearance sometime in September.

William (Bill) J. Langer's, Range Technician GS-4, last work day was on October 9. Bill and his family returned to Wadena, MN where he will continue his search for employment elsewhere.

William (Bill) A. Matthews', Range Technician GS-4, last work day was on October 9. Bill returned to his parents home in Iowa City, IA where he will continue his search for permanent employment.

Roger S. Foster, Range Technician GS-6, worked his last day on October 23. Roger returned to his ranch here in Valentine.

Terry L. Nelson, Range Technician GS-4, also worked his last day on October 23. Terry returned to this ranch here in Valentine.

Kevin R. Kvame, Range Technician GS-4, worked his last day on October 23. Kevin continues his education and search for permanent employment in Mission, SD.

Richard (Rich) I. Sterry, Range Technician GS-6, worked his last day on October 30. Rich returned to his home in Presho, SD where he will continue his search for permanent employment.

Bridget C. Thornton reported for work on November 16 as the new Office Automation Clerk, GS-4. Bridget is a native of Valentine, though she just returned from Germany where she was a computer operator for the Department of the Army. Bridget is married and has two small children.

Royce R. Huber is the new Refuge Manager for the Ft. Niobrara-Valentine Complex. Royce reported officially on November 30. Royce was the Refuge Manager for Crescent Lake and North Platte NWR Complex, headquartered in Morrill, NE. Royce's family will be joining him sometime after Christmas.

4. Volunteers

Nine refuge volunteers were recognized for their many hours of service at both Ft. Niobrara and Valentine NWR's. The volunteers were presented with a certificate, a volunteer pin, and a hardbound copy of A Sandhills Almanac at Manager Ellis' going away party on May 15. Those honored were Anne Vaughn, Annie Kime, Peg McDaniel, Dick Robbins Jr., Betty Sellers, Bill Rhodes, Shane, Melvin, and Afton Ellis. They have helped out on a wide variety of tasks including round-ups, fire dispatch, providing information to visitors, and maintenance.

6. Safety

The safety meeting for January was given by Casey McPeak, Maintenance Worker. The topic was "Frost Bite, etc."; handouts were given out and a film entitled "By Nature's Rules" was shown.

The safety meeting for February was given by Maintenance Worker Turner. The topic was "Public Safety on A Wildlife Refuge" and a film entitled "The Un-calculated Risk".

The monthly safety meeting for March was Defensive Driver Training presented by a Nebraska State Highway Patrolman. Handouts were given out and videos along with other visuals were shown. A test was given on the final day.

The monthly safety meeting for April was given by Engineering Equipment Operator Purdy. A film was shown in which several methods of CPR were demonstrated relating to whether the victims were adults or children and were conscious or unconscious.

The monthly safety meeting for May was given by Refuge Assistant Ayers. The topic was "Accident Forms - the timely/proper way to fill them out". All present were given copies of the various forms and each form was covered and questions were answered as to how/when, etc., these forms are to be completed.

The monthly safety meeting for June was given by FMO John Segar and his topic was "Fire

Readiness - Mentally and Physically". Handouts consisting of the Fireline Handbook, Equipment Checklist, Fire Gear Inventory, and a paper on Hydration.

The monthly safety meeting for July 31 was given by the YCC enrollees, whose topic was "Drinking and Driving". A film entitled "The Alcohol You" was shown and then the enrollees each gave a short presentation on the major points of the film. The film used cartoon characters to show how alcohol affects the body functions such as speech, thought processes, motor functioning, etc. The film also pointed out that hot coffee and cold showers do not aid the sobering up process - only time and the liver can do this.

The December Safety Meeting was presented by John Segar, FMO. The topic was "Wildland Fire Entrapment". A half hour video entitled "Wildland Fire" was shown. The main point emphasized was that everyone should know and follow the 10 Standard Fire Orders and not to allow emotions to control the situation.

7. Technical Assistance

Biologist McDaniel provided technical assistance to Greg Schenbeck, USFS-Nebraska National Forest re: grazing rates and discussed prairie grouse nesting cover.

Biologist McDaniel forwarded photos and waterfowl management data to Gerry Duestcher, Waterfowl Biologist-B.L.M., Lewistown, MT. The information is to be incorporated into a training session that Gerry is preparing for B.L.M. personnel.

A list was prepared and sent to Linda Walters at the University of Oklahoma on the Ft. Niobrara NWR bison weights for the past three years. Ms. Walters is studying bison weights and related forage.

Biologist McDaniel reviewed the Nebraska Plains Sharp-tailed Grouse draft prepared by Wm. Vodenhal, District Biologist - NG&P, for the prairie grouse publication being sponsored by the Prairie Grouse Technical Council.

Biologist McDaniel continued coordination with USDA-Nebraska National Forest regarding residual cover measurements and minimum nesting requirements for prairie grouse.

Biologist McDaniel provided assistance to Jon Farrar, Senior Editor, Nebraskaland Magazine, future articles re: Sandhill wetlands and also prairie grouse.

Biologist McDaniel provided assistance to Dick Gersib, NG&P, re: grassland measurement/nesting cover documentation. Biologist McDaniel also discussed VOR documentation with Project Leader Berlinger, Alamosa-Monte Vista NWR.

Biologist McDaniel was requested by the Forest Service to review the Lord Lake DU Project at McKelvie National Forest. DU personnel were not impressed with all aspects of the project. The project was designed by Nebraska Game & Parks and SCS personnel without much oversight from the Forest Service. Above average precipitation during the 1980's did provide excellent wetland conditions which was enhanced when an adjacent landowner ditched and drained a "hay meadow" upstream of the project. The probability of the high moisture conditions to cease was expressed when project planning was initiated several years ago. Since 1989 below or average precipitation has resulted in an inadequate water supply to take advantage of the water control structures funded by DU. Several of the "criticisms" by DU were not justified. The project will cost a considerable amount of money to maintain a productive situation for waterfowl. Consideration by the Forest Service includes establishing wells to improve the water supply - this proposal was also discouraged. The bottom line is "grin and take your lumps" - in another 25 years the water cycle will be up again!

Biologist McDaniel provided technical assistance to Larry Mechlin, Research Biologist, Missouri Conservation Department, re: possible effects of hunting of other species on prairie chicken management areas; also management of grassland was discussed.

Biologist McDaniel provided rationale, re: mowing dates and probable affects on upland nesting birds to Dean Mostad, a private land coordinator for the ND Game and Fish.

Biologist McDaniel reviewed a proposed prairie grouse article written by Jon Farrar for NebraskaLand Magazine.

Biologist McDaniel provided information and publication references to Rox Rogers, National Elk Refuge, re: vegetative monitoring.

Biologist McDaniel provided orientation, re: VOR documentation to Jim Sedgewick and other NERC staff for vegetation monitoring along the breeding bird transect lines.

Technical Assistance: Biologist McDaniel provided technical assistance to Lang Elliott, wildlife sound recorder, and Tim Gallager, Cornell Laboratory. They also provided assistance locating duck nests on H.U.18C1 on Valentine NWR.

Biologist McDaniel provided additional assistance to Glen Moravak, USDA-Ft. Pierre National Grasslands, re: duck brood survey procedures and literature.

Biologist McDaniel was contacted by San Francisco Bay NWR re: possible gopher snake (another bullsnake) predation on Clapper Rail eggs.

Biologist McDaniel was contacted by LaCreek NWR re: white pelican banding procedures employed the last time the pelicans were banded at LaCreek NWR. The best advice provided was to take a

shower immediately after the project is completed to keep from getting eaten alive by "bugs" from the pelicans.

Biologist McDaniel provided assistance to Gerry Steinauer, NG&P, re: locations of rare and endangered plant species and fen in Dewey Marsh while he was on refuge on July 22.

Biologist McDaniel provided assistance to Cheri Miesar, graduate student-SDSU, re: vertebrate sampling techniques for a bio-diversity study of wetlands in Minnesota - advisor Dan Hubbard, SDSU.

Biologist McDaniel provided assistance to Janet Mizzi, co-op student-FWE, Bismarck, re: reptile sampling techniques for a bio-diversity study of the Missouri River - advisor Chuck Berry, SDSU.

Biologist McDaniel provided assistance to Research Biologist L. Mechlin, Missouri Dept. Conservation, re: prairie chicken management.

Wildlife Biologist McDaniel coordinated biological monitoring activities with Wildlife Biologist R. Garcia at the request of Project Leader S. Berlinger, Alamosa-Monte Vista NWR. Basic sampling and computer software procedures were prepared on disc and mailed. Similar software procedures will be provided to A. Timberman, LaCreek NWR, Quivera NWR and RO in the near future. Procedures include hatching chronology of broods, VOR sampling-analysis of grasslands and nesting cover, documentation of use-days and duckling production index. The procedures, now developed, will save others a considerable amount of time.

Acting Refuge Manager Lindvall met with Jerry Jasmer, Larry Pollard, and Mike Anderson from the Soil Conservation Service. They are interested in enhancing riparian areas in the Sandhills. Their programs would mesh well with our private lands program. They are interested in a project approach rather than a watershed approach.

Wildlife Management Institute personnel (Sparrow, Harmon, Willianson, McCabe, Bryne, McCornel and McKenzie) held their annual hunting rodiovous on Valentine NWR and Biologist McDaniel met with them on the evenings of October 2 & 3. Discussion centered around biological diversity and compatibility issues on refuges that are presently under fire. Three items surfaced in the discussion: (1) refuges do not need additional laws or regulations to carry out our legal mandates; (2) refuges have not done an adequate job of documenting and/or advising the public the status of biological diversity on refuges; and (3) incompatible uses should be taken care of internally rather than have outside interests force the changes. Dr. Sparrow had discussed these issues with Director Turner the previous week.

Biologist McDaniel provided 1984-92 cormorant production data for Valentine NWR to Greg Wingfield, NG&P, at his request.

Biologist McDaniel provided duplicate slides of bullsnake predation on waterfowl nests to Bob Bloom, MBO, at his request.

Biologist McDaniel was contacted by Wm. Vodenhal - NG&P and Larry Mechlin - MO Dept. Cons., re: prairie grouse management.

Biologist McDaniel was contacted by Ron Rusthstrom - Kansas Wildlife & Parks re: private lands management.

Biologist McDaniel provided "on-side" technical assistance to Dr. Pat Reece, Range Extension Specialist, and Reg Phillips, Ranch Manager-Wyoming, re: prairie grouse nesting cover and discussed balancing wildlife and domestic grazing issued on public lands.

Biologist McDaniel provided technical assistance to Rocky Plettner, Environmental Specialist, Nebraska Public Power District, re: trapping techniques for improving piping plover nest success. Al Sargent, NPWRC, suggested Mr. Plettner contact Wildlife Biologist McDaniel.

8. Other

a. Meetings

Refuge Manager Ellis and Refuge Operations Specialist Lindvall attended the Annual Fish & Wildlife Service and Nebraska Game and Parks Commission Coordination meeting held in Lincoln, Nebraska on March 5.

Refuge Manager Ellis and Refuge Operations Specialist Lindvall attended the Annual Fish & Wildlife Service and Nebraska Game and Parks Commission Coordination meeting held in Lincoln, Nebraska on March 5.

Supervisory ROS Sellers, ROS Lindvall, Wildlife Biologists McDaniel and Kathleen McPeak attended the Zone III Project Leaders meeting held at Estes Park, CO from August 24 through August 26, 1992.

Mark Lindvall, Len McDaniel, Kathy McPeak, Richard Sterry, and Bill Matthews attended the annual meeting of the Nebraska Chapter of the Wildlife Society held in Halsey, Nebraska on October 1 and 2. Mark Lindvall presented a paper, Comparison of Wildlife Use Between Rested and Short-duration Grazed Grasslands at Valentine National Wildlife Refuge, Nebraska. Bio-diversity was the emphasis of one day's papers and Mike Bogan presented a paper on the bio-diversity study that NERC is doing on Ft. Niobrara and Valentine NWR's.

ROS Lindvall attended the meeting on the Partners for Wildlife Program held in Grand Island on October 29.

Fish and Wildlife Service staff from Nebraska met with aides for the Nebraska Congressmen and Senators on May 27 and 28 at Ft. Niobrara NWR. Jim Barr, Gregg Stull, and Eugene Glock represented Congressmen Bereuter and Barrett and Senator Kerry. The items that seemed to interest them most were wetlands, delineation and simplified regulation, and grazing. They now get more calls and letters from ranchers without federal land grazing permits who are interested in getting rates on federal lands up to fair market value. They were very interested in the bid system for grazing.

b. Training

Refuge Manager Ellis and Maintenance Worker Kime completed their Law Enforcement Inservice Training at Marana, AZ from January 22-26, 1992.

Supervisory Refuge Operations Specialist Sellers, Refuge Operations Specialist Lindvall, and Biological Technician Vaughn completed their Law Enforcement Inservice Training at Marana, AZ from January 28 through February 1, 1992.

Office Automation Clerk Kesterson completed her Region 6 New Employee Orientation Program, held in Denver, CO from January 28-30, 1992.

Wildlife Biologists McDaniel and McPeak attended the Region 6 Migratory Bird Workshop held in Kearney, Nebraska on March 23 thru March 26.

Training and orientation continued for Ronnie Sanchez, a student trainee.

A Workforce Diversity Training session was held at the Peppermill in Valentine on April 7 and 8. Attendees were SROPS Sellers, ROPS Lindvall, Wildlife Biologists McDaniel & McPeak, Student Trainee Sanchez, and Refuge Assistant Ayers.

Refuge Operations Specialist Lindvall completed the 40 hour small purchases course that is required prior to re-issue of warrant authority.

Twenty-six Ft. Niobrara-Valentine NWR Complex personnel received training and certification in First Aid and CPR during two separate sessions - one on June 10 and the second one on June 12 at the Cherry County Hospital. The four YCC enrollees were included in these training sessions. The training sessions were taught by Ruth Tinant and Neal Straight.

FMO Segar attended the U.S. Fish & Wildlife Service Fire Weather training session in Albuquerque,

NM the week of December 7-11, 1992.

F. HABITAT MANAGEMENT

2. Wetlands

Precipitation raised wetland elevations high enough that Dewey and Pelican Lakes overflowed. The elevation of Dewey Lake increased from 2923.92 at the end of February to 2924.22 m.s.l. by mid-month, but, declined by the end of March to 2924.10 m.s.l. Many temporary wetland filled in early March and provided excellent conditions for the early migrants - Canada geese, mallard and pintail.

Carp were documented in the Marsh Lakes during the month. Their presence and activity was not documented until spawning was initiated this year. Several specimens were recovered and will be aged; however, it appears that they are an age class that resulted in an initial spawn of the original infestation probably in 1987. This is an "ecological disaster" for this very productive 1,800 acre wetland complex.

The July issue of NEBRASKALAND MAGAZINE included an article by Gerry Steinauer with photographs by Jon Farrar on "Sandhills Fens". Featured was the fen in Dewey Marsh on Valentine NWR. A draft of this article was previously reviewed by Biologist McDaniel.

5. Grasslands

Biologist McDaniel provided information re: locations of native prairie area within western Nebraska and South Dakota for photographer/native prairie enthusiast Michael Williams, Chicago, Illinois.

Grassland cover for the 1992 nesting season, after initiation of the planned spring grazing, will result in 53% of the 62,000 total grassland acreage on Valentine NWR being in disturbed cover condition by May 31; and as of June 15 the total disturbed acreage will be 60%. This is a higher ratio of undisturbed to disturbed cover than available after spring grazing was completed in 1990 (78%) and also in 1991 (56%). Potential disturbed cover for 1993 is 42%--which is the highest potential ratio of undisturbed to disturbed cover acreage since 1990.

Wildlife Biologist McDaniel discussed grassland monitoring procedures and computer application with Dan Schaad - Quivira, Paul Van Ningen - Arrowwood, Jay Peterson - Lake Andes, Mark Vaniman - Flint Hills, Bruce Schoonover and Brad Johnson - Kirwin and Dick Gersib - NG&P, Lincoln. Fabrication of the VOR pole (Robel pole) was also discussed with interested personnel at the Migratory Bird Management Workshop.

A grassland tour was conducted on the Valentine NWR on April 15. In attendance were Mr. V. Eatinger, Mr. Keith Colburn, Gene Mack, and Larry Vaughn. The tour was to provide assistance to Mr. Mack in communicating with ranchers.

VOR (visual obstruction readings) on Valentine NWR were obtained with modifications in data collection/analysis. Presently, all readings are recorded at 1 inch (0.25 dm) along with the species of vegetation causing the VOR rather than recording the average of each station's readings (4 total) and the dominant and secondary plant species causing the VOR. This change will increase the sample size of plant species and thus improve the long-term monitoring effort. The VOR's are being recorded in Dbase III, translated into Lotus for analysis (data, distribution) and presented in graphic form. Analysis of 1 inch and 2 inch (0.5 dm) VOR range increments indicates that most of the "noise" or a smoothing of the data are accomplished by obtaining a frequency of occurrence at the 2 inch VOR range. Analysis of nesting cover and vegetation at nest sites at <2 inch range increments is not practical unless horned larks are involved.

Information was provided to the Regional Director for answering a letter written by local rancher Byron Eatinger. Mr. Eatinger stated in his letter that the grasslands at Valentine NWR are poorly managed.

Biological monitoring (VOR and photo-point) was documented before and after the hail storm of July 3 as well as on-going grazing and rest treatments. Hail did not impact units in rest treatment as severely as units that had been recently grazed. In particular, H.U. 21A1 was recently short-duration grazed and the subsequent hail gave the appearance of the Sahara Desert.

7. Grazing

In 1985 the refuge habitat management program was changed and short-duration grazing started. Prior to 1985, much of the refuge grasslands were grazed on 6 week rotation. Refuge permittees initially resisted the change to short-duration grazing. We have however seen a gradual acceptance of it over the past years. Acceptance has come through reduced grazing fees for the extra work involved in moving cattle and the obvious improvement in refuge grasslands. Several ranchers have even started using short-duration grazing on their own ranches. Authorized AUM for each permittee have remained about the same as in 1991.

Grazing fees for 1992 were:

spring grazing treatment	\$5.65/AUM
short-duration grazing	
1 day in unit	no charge
2 days in unit	\$4.25/AUM
3 days in unit	\$5.20/AUM
4 days in unit	\$7.05/Aum
5 days in unit	\$8.00/Aum

6 days in unit	\$8.95/AUM
7 days in unit	\$9.90/AUM
8 or more days in unit	\$10.75/AUM
feed hay and graze in unit	\$10.75/AUM
feed hay in feed lot	\$5.65/AUM
feed hay on road	\$5.65/AUM
winter	\$10.75/AUM

The full rate of \$10.75 is an decrease of \$.65 from the 1991 fee and is set by the Regional Office and reflects an decrease in cattle prices. Permittees also had their grazing bills reduced for improvements such as wells, fence, and tanks installed. In 1992, \$29,780 was spent on improvements and deducted from final billings. Total collections for the 1992 grazing season were \$35,092. This total also does not include the value of the refuge share of hay.

The methods and expected results for the different grazing strategies are explained below. The acreage of grassland treated with each type of grazing is listed in table ?? and shown in figure ??.

a. Spring Grazing Treatment

Spring grazing treatment (SGT) is done before the end of May on sub-irrigated meadow sites. The cattle are in the unit for greater than 2 weeks. Cattle eat or trample almost all of the residual cover. They also overgraze and thus reduce undesirable cool season exotic grasses. Cattle can be placed in a unit to remove residual and then brought back in later to hit the cool season exotics. In some instances, cattle are brought back in at several later dates for the same purpose. Because much of the feed is in the form of old mat, this treatment is best done by fall calving cows and not by lactating spring calving cows.

Dramatic results occur with this treatment. Exotic cool seasons, as Kentucky bluegrass, are suppressed and native warm seasons, as switchgrass, increase in vigor and density. The disadvantage is the loss of the unit for nesting in the year of treatment and a lower waterfowl nesting density in the following year. Often the unit can however be rested for up to 5 years following treatment.

In 1992, 21 habitat units totaling 21,675 acres received a spring grazing treatment. This year in some units, spring grazing treatments were done before the growing season. This was done in areas without Kentucky bluegrass problems and on some areas to be hayed later.

b. Spring Short-duration Grazing

Spring short-duration grazing (ES-SD) is grazing a unit for less than 2 weeks during May. Generally the cattle are in the unit for only 3 to 5 days. This type of grazing is generally done in hill units to stimulate growth of grasses, especially cool seasons. The short exposure times eliminate overgrazing. In 1992, 52 habitat units totaling 10,607 acres had spring short-duration grazing. Note that these totals include some units ES-SD followed by SD-S or H.

c. Short-duration Summer Grazing

Short-duration summer grazing (SD-S) is done from June 1 through September 1. Cattle are in a unit for less than 2 weeks. Most units are grazed only 3 to 5 days and the cattle moved on to the next unit. Electric fences are used to break up larger units and increase stock density. Most short-duration summer grazing was completed by the first week in August. In 1992 104 habitat units totaling 22,581 acres were short-duration summer grazed. Rainfall was sufficient all summer to allow for regrowth. August was however dry and grasses grew little.

A severe hail storm went across a large section of the refuge in July. In large areas hail covered the ground to a depth of several inches. Twenty four hours later hail still had not melted in some places. Grasses were flattened and also frozen in some cases. Those units that were grazed and then hailed on looked poor at the end of the summer. A map showing the areas affected in Figure ??.

d. Fall Grazing

Fall grazing is done from September through November. Fall grazing can reduce mulch accumulations, add fertilization, and maintain grouse leks. If done at the proper time cattle will also graze out small wetlands and leave the surrounding upland vegetation alone. Generally the wetlands have green in them while the uplands have only cured grasses. Grazing in the wetlands recycles nutrients and provides pair habitat for ducks in the spring. Generally we have moved away from fall grazing except for pothole grazing. Fall grazing eliminates both winter cover and nesting cover in the following year. Some units were fall grazed in 1992 that will be given a spring grazing treatment in 1993. In 1992, 3 habitat units totaling 894 acres were fall grazed.

e. Winter Grazing

Winter grazing (W) is done during the November through April period. In winter grazing, cattle are fed hay on a feed ground in a unit. The hay comes off the refuge. When the weather is harsh the cattle feed on hay but when it is nice they graze away from the hay ground. Winter feeding creates dense weed patches for several years following the treatment. These weed patches provide winter food for deer, pheasants, and other resident wildlife. Units with a history of winter grazing combined with feeding also have excellent growth of grasses away from the feedlot. This is due to the import of energy in the form of fertilizer. Hay is cut in the meadows.

One Unit 19C was targeted as a new winter feed area. Our plan is to reduce yucca and increase grasses in this unit using winter grazing and feeding. Resident wildlife also utilize waste grain from the feeding operation. Presently two feeding areas are maintained in Calf Camp and Little Hay Valleys. Each feeding area has three habitat units in it of which only one is used each year. Winter feeding can also be used to stabilize blowouts and road. In 1992, 7 habitat units totalling 1465 acres were winter grazed.

8. Haying

The late frost, cool summer weather, and high water table resulted in a poor hay crop. Some higher areas were mowed late to make up a part of the shortage. Eight hundred and thirty one acres of sub-irrigated meadow, wetlands, or sand sites were mowed and hayed by four

permittees. The haying was done in 24 different habitat units and yielded 1278 tons of hay. Units hayed are listed in Table ?? and shown in figure ??. A program was continued to improve the quality and quantity of hay produced. Meadows to be hayed are spring grazed prior to the growing season and have hay fed on them in the winter. Cattle will provide fertilization and remove old growth from the hay.

Haying is used to provide browse areas for Canada geese, sandhill cranes, prairie grouse, and deer. Mowing also provides lek sites for grouse and opens up small wetlands for prairie habitat. The haying is done under cooperative farming agreements with a 40/60 (refuge/permittee split) and on a feed back on the refuge program. The permittee delivers the refuge share to Fort Niobrara NWR for winter feed for Texas longhorns or to areas on Valentine NWR for road hay. Road hay is used to stabilize sand trails used by the public. This year 429 tons were delivered to Fort Niobrara NWR and no hay held for the roads because of the shortage. Two hundred and five tons were fed in winter grazing to create weed patches and reduce yucca as described in section F7e. Permittees share was 644 tons of hay. Of this they fed 111 tons on refuge meadows to improve hay quality and quantity.

Again this year areas to be hayed were searched for the endangered prairie white-fringed orchid. When plants were found, the areas were marked and not mowed.

9. Fire Management

On March 30 at 3:30 p.m., Maintenance Worker Kime with a type 6X engine responded to a fire call on private land. When he arrived the fire was virtually contained by six ranchers and a tractor with a grading blade. He assisted until the fire was declared out. Approximately 2 acres were burned.

On April 5, a mutual aid request came from Todd County/Rosebud BIA via the Valentine Rural Fire Protection District. One type 6X engine (Ellis and Purdy) and two type 7X engines (Segar and Lindvall; Sellers and McPeak) arrived on the scene at 1830 hours. The fire was essentially contained due to light fuels, approximately 10 ranches, 2 Todd County engines, 2 Valentine engines, and 1 Valentine tanker. The Ft. Niobrara NWR engines assisted in the mop-up and were released at 1915 hours. Final fire size was approximately 300 acres (Fuel model 1). Source of ignition was downed power line due to winds gusting 30 mph with passage of storm front.

On April 29, a fire was reported to the Valentine NWR at 2120 by Judy Reece. A tractor was on fire with potential of becoming a range fire. McDaniel and Sterry responded in a type 6X engine from Hackberry Headquarters. Kime responded in patrol from residence. The Valentine Rural Fire Protection District (VRFPD) was also notified. McDaniel and Sterry were first on the scene. The fire had been knocked down by an extinguisher, but was still smoldering. McDaniel used extinguisher to cool fire, and then towed tractor away from a building. Kime arrived and disconnected the tractor's electrical system to prevent further ignition. The VRFPD arrived and

declared the fire out. Cause was determined to be vegetation accumulated on the tractor.

On May 15, a mutual aid request came from the Valentine Rural Fire Protection District. A fire was started by lightning on the Arabia Ranch and reported at 1615 hours. One type 6X engine (Turner/Sanchez) and one type 7X engine (Waln/Langer) responded with an additional 7X engine (Lindvall) readied and standing by. The fire was essentially contained upon arrival due to local ranchers, 1 Valentine RFPD tanker, 2 Valentine RFPD engines and assistance from the Wood Lake Fire District personnel. Turner, Sanchez, Waln, and Langer assisted with mop-up and then were released at 1716 hours. Approximately 10.0 acres were burned.

On June 3, at approximately 2200 hours, Supervisory ROS Sellers spotted a lightning strike fire. Rain put the fire out before initial attack could be effected.

On August 3, four of the complex fire fighters were dispatched to Chadron, NE where they were then transported to Rapid City, SD and flown to Salmon, Idaho. Fire Fighters Kevin Kvame, William Waln, Laura Eddy, and Richard Sterry were then placed on the fire line and assisted in fighting the forest fires raging in Idaho. They were released on August 11 and returned to the complex at 1:00 a.m. on August 12.

Six fire fighters were dispatched from the complex on August 19 and again flown from Rapid City, SD to Boise, Idaho. Fire Management Officer Segar, Fire Fighters Richard Sterry, William Langer, William Matthews, Kevin Kvame, and Donald McWethy were assigned fire fighting duties on the fire lines at the Payette National Forest in Idaho.

On September 2, Wildlife Biologist McDaniel and Range Technician Nelson responded to a fire on the Dick Ballard Ranch adjacent to Valentine NWR Headquarters. A large hay bale was burning as a result of lightning the previous evening. No one was home therefore refuge staff spread the burning bale out and allowed it to burn up so as not to endanger the remaining hay and also to minimize to amount of time expended on site.

FMO Segar, Range Aid/Technicians Kvame, Langer, Matthews, McWethy, and Sterry completed details as part of the Nebraska Interagency Crew for 19 days. The crew assisted in suppression efforts on the French Creek and Tomato Point fires in Idaho. This provided crew members excellent opportunities for on the job training and large fire experience, as well as, helping to improve interagency ties with other federal land management agencies in Nebraska.

Refuge fire fighters provided assistance on two local fires. The Ward fire started on October 21 approximately 1 mile west of Fort Niobrara NWR and was contained at less than 0.1 acres.

The Ridgerunner fire started on October 22 approximately 20 miles northwest of Ft. Niobrara NWR and was contained at 1705 acres by over 20 engines including 5 from the Complex.

Fire Management Officer Segar monitored the prescribed burning operations on 6 burn units at Lacreek NWR on March 23.

Arrangements were made for sharing U.S. Forest Service computer system for interagency communication, monitoring weather and fire situation, and tracking resource availability.

Existing fire caches were inventoried and supplies were ordered for restocking.

FMO Segar met several times with various Valentine Rural Fire Protection District officers. He also met with cooperators from the U.S. Forest Service, Bureau of Land Management, and the National Park Service in the State of Nebraska.

FMO Segar visited the Regional Office during the week of April 26 for an orientation with Fire Coordinator Troester and met with Regional staff. He also assisted the Regional Fire Coordinator with the preparation of a regional dispatch plan and the review of burn plans.

FMO Segar conducted step tests for permanent staff at Ft. Niobrara-Valentine NWR Complex staff and new on-coming Range Aid/Technicians (Fire Fighters).

On June 1, FMO Segar met with the staff of Scottsbluff National Monument concerning opportunities for improving cooperation in fire management.

S130/S190 fire training courses were conducted by FMO Segar on May 4-7. There were students from Crescent Lake NWR and Rainwater Basin WMD in addition to students from the complex.

Arrangements were made for medical examinations and/or Lyme Disease testing for all fire fighters. Medical examinations are to be given at the Cherry County Physicians Clinic, while the drawing of blood for the Lymes Disease testing is to be done at the Mission Medical Clinic in Mission, SD. Actual testing of the blood drawn for Lymes Disease will be done by LCD in Sioux Falls, SD.

The Regional Fire Coordinator (RFC) reviewed the complex fire program with FMO Segar on May 12. FMO Segar spent the remainder of the week assisting RFC Troester with reviews at Crescent Lake NWR, North Platte NWR and attending meetings at Lacreek NWR, various National Forests in Nebraska, and the Niobrara Valley Preserve.

Wildland fire awareness and prevention programs were presented to 4-H members from several local clubs at the Halsey 4-H camp.

FMO Segar met with the Rosebud BIA fire staff to discuss cooperation and to borrow PPE.

FMO Segar prepared the Regional Fire Dispatch plan.

FMO Segar instructed a S130 and S190 training course at Fort Niobrara NWR and at Scottsbluff during the month of June.

FMO Segar traveled to BIFC on June 29 to work on the Fire Management Information System and to develop specifications and possible sources for future engine purchases.

FMO Segar began mechanical hazard fuel reduction project at Ft. Niobrara NWR in June.
Fire Management:

FMO Segar conducted 8 hours of engine inspection, operation, and tactics training for fire crew.

Range Technician McWethy was detailed to the Alpine Interagency Hotshot Crew to provide assistance on the Foothills Fire Rehabilitation project. All expenses are being paid by the U.S. Forest Service.

10. Pest Control

A letter outlining our plans for control of Canada thistle and leafy spurge on Ft. Niobrara and Valentine NWRs was sent to the Cherry County weed superintendent.

ROPS Lindvall attended the leafy spurge task force meeting held in Basset on May 7. Insects, pathogens, goats, and herbicides are all being tried in Nebraska. Experiments are also being tried using spurge as a forage. Its good feed, cows just don't like the taste. The spread of purple loostrife in Nebraska wetlands was also discussed. Gene Mack, USFWS Kearney, is interested in getting an educational program going through private lands. A few purple loostrife plants have been found on Valentine NWR.

Biological Technician Vaughn attended the Leafy Spurge Symposium held in Lincoln. He also had a display which outlined our efforts to control weeds using non-chemical methods. There was quite a bit of interest, especially in the portable corrals used to house goats at spurge patches.

Insects for biological control of both leafy spurge and Canada thistle were received and placed on three sites at Valentine NWR. Grazing permittees paid for the releases and had the cost deducted from their grazing bill. Gall flies (Urophora cardui) were released in habitat units 21C3 and 23B2, 100 at each site. Canada thistle plants that were attacked did not flower. One hundred root boring flea beetles (Aphthona nigriscutis) were released in a leafy spurge patch in habitat unit 15C3 in June. No visible sign of control was seen this year.

Twelve Angora goats were used to control spurge on the east side of Highway 83 at Valentine NWR. The goats really clean it up but there is a lot of labor involved in moving the fence and

trailer from patch to patch. The goats were loaners at no charge. We picked them up, kept them on spurge for the summer, and returned them. Spurge patches in habitat units 31A, 34C1, 35B, and 34E3 were grazed with goats. Nine one meter square sample areas in three patches have shown stem density reductions of 10, 55, and 15 percent on the average.

13. WPA Easement Monitoring

The Johnson easement (later named Holt Creek WMA) was visited on three occasions and the fence repaired. Most of the fencing is old and in need of replacement. The buildings on the property, one a historical structure, are in poor repair. The area along the creek is in excellent condition with the exclusion of grazing. The Mead easement was not visited this year. See section C-2 also.

G. WILDLIFE

2. Endangered and/or Threatened Species including Plants

b. Bald Eagle

Bald eagles began to concentrate on Valentine NWR during the first of the month--shortly after refuge lakes began to open up.

A mature bald eagle found dead west of Valentine on February 23 was turned over to Ft. Niobrara NWR by Nebraska Conservation Officer Mick Gray. It was found approximately 75 feet from 3 heavily scavenged calf carcasses. It was sent to the Oregon Forensics Lab for necropsy.

Bald Eagles have been particularly common on Valentine NWR during March - after waterfowl moved into the area. APHIS-ADC aerial personnel reported observing 30+ bald eagles during aerial coyote hunting activities. The eagles remained through the end of the month.

An eagle killed and consumed a Canada goose on Cow Lake - a single goose egg was left in the middle of the pile of feathers. On March 17, an adult bald eagle was observed "hovering" over a lesser scaup that had dived below the surface of the water to escape the eagle. The eagle "hovered" for approximately 20 seconds before giving up the chase.

d. Blowout Penstemon

Biologist McDaniel assisted Dr. Dick Stubbendick, UN-L, collecting leaves of blowout penstemon plants for genetic research, per his permit, on the Francis Crowe Ranch and Valentine NWR.

Dr. Ron Weedon, CSC, was on Valentine NWR inventorying blowout penstemon plants on June 28. He also required assistance when the fuel pump failed on his motor vehicle.

f. Prairie white fringed orchid

Biologist McDaniel was contacted by Dr. Lee Manskee, member Prairie Fringed Orchid Recovery Plan, re: specific site locations of orchids and land use treatment on Valentine NWR. While it appears that the species has responded to disturbance of the ground surface on Valentine NWR, it has not necessarily also coincided with cover removal - high water levels also provided disturbance.

Biologist McDaniel was contacted by Mike Witt, Nebraska Department of Roads (NDOR), re: the prairie fringed orchids in Highway 83 R.O.W. in Sweetwater Valley. This section of highway is scheduled for construction (extension of shoulders) in the near future. Both NG&P and FWE-Grand Island have been notified. NDOR recently took photos of plants in blossom at this location and forwarded them to the NDOR office in Lincoln.

Prairie Fringed Orchid: Prairie fringed orchids are not as common on Valentine NWR this year compared to 1991. Only ten flowering plants were observed in Pony, Sweetwater and Cow/King Flat valleys. Orchids were not observed in Calf Camp Valley nor on the Powell Ranch adjacent to Duck Lake.

g. American Burying Beetle

Another new record of occurrence was verified on Valentine NWR -- the American Burying Beetle. Biologist McDaniel collected a "dead" specimen of the American Burying Beetle on North Marsh Lake, H.U.18B4, on April 29 from underneath an overturned boat. The specimen was dried and partially consumed--the specimen was photographed and forwarded to Wally Jobman, FWE-SE, Grand Island, NE.

Two additional specimens of the American Burying Beetle were collected and released by Mike Shipman and Mylea Petersburg, NERC, on Valentine NWR in H.U. 16A1 and H.U. 16B1. The two specimens were captured in the pit traps installed by NERC. Photos were not obtained, but, NERC personnel were previously shown photos and advised of the specific markings of the species which are difficult to miss with the specimens in hand. The records were forwarded to Wally Jobman, FWE-Grand Island, NE. Biologist McDaniel was also contacted by Mary Clausen, NG&P re: the records.

Three additional specimens of the American Burying Beetle were collected on Valentine NWR during the month - bringing the total to six. These specimens represent the only records for Cherry County and together they are also more records than have been documented throughout the rest of Nebraska. Unfortunately, the three July specimens were found prematurely dead in snake traps in H.U.18C (2 specimens - July 13) and H.U.21B1 (1 specimen - July 10). The specimens have been frozen and will be forwarded to FWE-Grand Island in the future. Snake traps were opened to allow any future captured beetles to escape.

Records of the American Burying Beetle on Valentine NWR were forwarded to FWE-Grand Island and coordination with Wally Jobman (FWE-Grand Island), Brent Ratcliffe (UN-L), and Ken Frazer (FWE-Okla.) was accomplished. On July 24 Brent Ratcliffe was on Valentine NWR; however, he did not arrive as scheduled with Biologist McDaniel and it is not known whether or not any night-lighting was accomplished to verify additional specimens.

It is obvious that adequate sampling has not been accomplished to document the geographic range of the American Burying Beetle. Also, present literature indicates that the species does not occur in sand soils. Additional coordination is planned with FWE-Grand Island to determine the status of this species in Nebraska.

3. Waterfowl

a. Ducks

Approximately 400 Canada geese (FTN - 200; VLT - 200) and 50 mallards (FTN) were reported using the refuges during the midwinter waterfowl survey period in early January. Results forwarded to Joe Gabig, NG&P-Lincoln and John Cornely, Mig. Bird Coord.-R.O.

Common goldeneyes and mergansers have been present all winter and by the first week of February mallards also began showing up on Valentine NWR. On February 20 pintail were observed and several thousand were present by the end of the month. Gadwalls were also observed on February 27.

Excellent temporary wetland conditions resulted in large concentrations of mallards and pintails adjacent to Valentine NWR on private meadows during most of the month. The birds were cleaning up corn that ranchers have been feeding to their livestock. The birds feeding activity breaks up and spreads the manure; therefore, ranchers do not need to mechanically drag the chips in the spring. Mallard and pintail concentrations migrated out of the area by March 20.

All species of waterfowl except ruddy ducks were observed by the end of March. Pintails were particularly common during March, but, widgeon numbers were very low. Shoveler numbers began increasing by mid-month. Lesser scaup and bufflehead concentrations remained until the end of the month. Canvasbacks basically migrated by March 25.

Migrating waterfowl generally moved through the area during the month, but, a few buffleheads, ringnecks and scaup remain on Valentine NWR. Ruddy ducks were first observed on April 22 and their population increased during the rest of the month.

The electric fence barrier was installed to prevent mammalian predators access to the Island-H.U.18C2. Also, the bullsnake traps were nearly all in working order by the end of the month. Bullsnakes were first observed (2 trapped) on April 27 and were commonly observed the

rest of the month--which is somewhat early, but not unexpected due to the open, dry winter.

Breeding pair counts were completed on only the brood sample lakes this year due to lack of personnel available to complete a total count on Valentine NWR. Total pairs tabulated was 2,300 (83% dabblers) v.s. 2,074 (90% dabblers) in 1991. Total blue-winged teal pairs decreased by nearly 10%; however, mallard, gadwall, shovelers, and ruddy ducks increased from 1991. Breeding pairs on the Marsh Lakes increased by 29% from 1991 (897 to 1,263) with blue-winged teal 20% higher than 1991. Mallard, gadwall and ruddy duck pairs also were higher on the Marsh Lakes compared to 1991.

Initial nest dragging activities were also curtailed this year due to the lack of available personnel. Approximately 100 acres, that have been dragged since 1983, were dragged within the Marsh Lakes Predation Control Area. During the first drag, the nest density in H.U. 18C1 was 40 mallard nests/100 acres which was similar to that documented during two drags in 1991. This unit has received rest treatment for six years and extensive bullsnake and mammal control activities have also been carried out since 1985.

To date, the Island (H.U. 18C2) has not been thoroughly searched for nests. The acreage has increased due to the declining lake elevation and will require considerable more effort to search on foot than the past 8 years. However, during trapping activities a total of 40 mallard nests have been located. Raccoon tracks have been observed since mid-May, but, none have been removed to date. Hopefully, the electrically charged exclusion fence is not preventing the animal(s) from leaving the Island. Several mallard nests have already hatched - and some destroyed.

The first mallard brood was observed on May 4; however, several others have been observed since.

Pair counts were done at the Tower property (later named Yellowthroat WMA). This year 421 pairs were counted on the 480 acre easement. The water control structure is working and has increased the water in the marsh section of the property. Also of interest is - it appears that the water table has been raised. Several wetlands that have been dry the past several years now contain water.

The second nest drag was completed in H.U.18C1 and H.U.21B. Nest density for mallards in the units combined was excellent--56 mallard nests documented on 140 acres (average of 40 mallard nests/100 acres). However, nest success is not as high as desirable with mammal (coyote and mink) predation being the primary cause of loss. Bullsnake depredations have been very low this year due to the control activities carried out since 1985 in these units.

Nest monitoring on the Island (H.U.18C2) have not included the entire acreage of the Island and the second search will be completed the first week of July. Early mammal predation resulted in many later nesting birds this year. To date, a total of 109 nests have been located--81 of which are mallards.

The second duck brood count was completed on Valentine NWR and Tower Property. Broods appear to be down; however, hen success and the duckling production index have not been calculated pending a possible early August count.

Several dead adult ruddy ducks were picked up from South Marsh Lake after the July 3 hail storm.

The 1992 Duckling Production Index of 3,308 for Valentine NWR was the lowest recorded since 1981. Dabblers comprised 95.6% of the total with mallards making up 33.6% and blue-winged teal 46.1% of the total index. Hen success was also the lowest recorded since 1981 and well below the 20% Regional objective maintenance level. Mallard hen success was 9% overall (13% within the Marsh Lakes Predation Control Area and 5% outside the Marsh Lakes); blue-winged teal was 6% overall (7% within the Marsh Lakes Predation Control Area and 4% outside). The Marsh Lakes' low hen success is directly related with the amount of high percentage of disturbed nesting cover acreage prior to and during the nesting season.

The waterfowl fall migration peaked at approximately 100,000 ducks, geese and coots the third week of October on Valentine NWR.

b. Geese

By mid-February 5-6,000 Canada geese were on and adjacent to Valentine NWR--a greater number than usually present at this time of year.

Canada goose spring migration concentrations continue to increase with approximately 12,000 birds on and adjacent to Valentine NWR. In the past three years Canada goose spring migration peaks have more than doubled. The goose migration peak occurred prior the March 20.

Several snow/blue geese were observed during the month adjacent to Valentine NWR. Several flocks of white-fronted geese were observed migrating through the area, but, none spent any time in the area.

A total of 420 Canada geese (including 107 pairs) were observed during the duck breeding pair count compared to 248 (112 pairs) in 1991. There continues to be a high percent of non-breeding geese using the area.

c. Trumpeter Swan

Trumpeter swans were observed west of Hackberry Headquarters, but, none were observed on Valentine NWR so far this year.

A group of four trumpeter swans were observed on Valentine NWR during April-two of which were immatures.

d. Coot

Coots were first observed on March 29 and had not moved into the area in any concentrations by the end of the month.

A total of 2,183 coots were tabulated during the duck breeding pair count which is considerably higher than documented the past 5 years. A total of 756 coots were tabulated on the brood sample lakes in 1991.

Approximately 20,000 coots were on Valentine NWR during the third week of October.

4. Marsh and Waterbirds

Species within this category are also recorded during the duck breeding pair count, but have not been tabulated.

White-faced ibis appear to be nesting on the Marsh Lakes again this year and cattle egrets have been observed. Cormorants are nesting on an island in the Marsh Lakes and will be inventoried in June. A pelican egg was found on this same island, but, as for the past four years, no nesting activity has been documented.

A total of 635 cormorant nests were inventoried on the Marsh Lakes.

5. Shorebirds, Gulls, Terns and Allied Species

A large nesting colony of western grebes is present on the Marsh Lakes and the first observation of hatching was observed on May 28. Shorebirds were not common this spring, but, with decreasing water levels some "peeps", short and long-billed dowitchers are present.

Western grebe broods are particularly abundant on the Marsh Lakes this year--approximately 3,000 were observed carrying young on their backs during the duck brood counts.

A total of 29 western grebes and 26 Forster's terns were picked up on the Marsh Lakes after the hail storm of July 3. Hail occurred south of the cormorant nesting colony on Middle Marsh Lakes.

6. Raptors

A goshawk continued to be observed at Hackberry Headquarters. during January. Dark phase rough-legged hawks are again being observed between Watts Lake and Francis Crowe Ranch near Hackberry Headquarters.

The preceding four years a great-horned owl has nested in an elevated goose nesting tub at the east end of Dewey Lake. Young owls were again documented this year.

7. Other Migratory Birds

During the month nine pair of loggerhead shrikes were on and adjacent to Valentine NWR--future observations will verify nesting activity.

Coordination with NERC personnel to obtain a better record for the first sightings of the year was accomplished. NERC personnel also records a new record for Valentine NWR - yellow-winged warbler.

8. Game Mammals

a. Deer

The 1992 firearm deer harvest on Valentine NWR was 88(79 whitetails and 9 mule deer). This is down compared to the past 4 years. There were at least 2 other deer harvested during the muzzleloader season.

10. Other Resident Wildlife

a. Prairie Grouse

Lek counts were conducted one week late on Valentine Refuge due to inclement weather; however, birds were still active and generally good counts were obtained. Prairie chickens continued the upward trend documented since 1977, when 69 breeding males were recorded, to 504 breeding males on 46 leks this spring. A total prairie chicken count is attempted on and immediately adjacent to Valentine NWR. However, sharp-tail information is collected from a sample and "as opportune" throughout the remainder of the refuge. Sharp-tails are difficult to locate by sound due to the prairie chicken density.

In cooperation with NG&P prairie grouse information is collected within a designated area (State Study Block) on Valentine Refuge.

This year 10 prairie chicken leks (65 males, 25 females) and 6 sharp-tail leks (73 males, 24 females) were recorded within the 25.3 sq. mi. sample. In total 33 sharp-tail leks with 336 males and 84 female were recorded.

This year's prairie grouse hunting season is the poorest documented since specific harvest data collection was initiated in 1982. The

Imm:Adult harvest ratio is presently 1.5 for sharptails and 0.8 for prairie chickens for 382 birds reported harvested. This year is the first time the sharptail harvest ratio was below 2.0 immatures per adult. The Imm:Adult harvest ratio in 1991 was 3.7 for sharptails and 3.2 for prairie chickens.

The total grouse harvest was higher than normally experienced due to the increase in hunter participation; however, the harvest per hunter day and the juvenile:adult harvest ratio for both sharptails and prairie chicken documented poor reproduction.

HUNTER SUCCESS, 1985-1992

Year	Hunters	Birds	Birds/Day
1985	251	351	1.4
1986	352	584	1.7
1987	449	730	1.8
1988	376	642	1.7
1989	290	459	1.6
1990	233	275	1.2
1991	299	434	1.5
1992	348	442	1.3

SHARP-TAILED GROUSE

	Juveniles	Adults	Unknown	Total
Juv/adult ratio				
1985	217	106	-	323
1986	401	123	-	524
1987	473	112	8	593
1988	279	136	4	419
1989	218	111	7	336
1990	137	63	2	202

1991	217	59	15	291	3.7
1992	203	130	13	346	1.6

PRAIRIE CHICKEN

Year	Juvenile	Adult	Unknown	Total	Juvenile/Adult Ratio
1985	20	8	-	28	2.5
1986	48	12	-	60	4.0
1987	107	26	4	37	4.1
1988	111	45	3	159	2.5
1989	67	30	1	98	2.2
1990	26	30	1	57	0.9
1991	93	29	14	136	3.2
1992	38	47	1	86	0.8

b. Ring-necked Pheasant

Pheasant parasitism has been documented in both duck and prairie chicken nests under observation. The pheasant population appears to be higher than it has been the past 10 years.

c. Wild Turkey

The flock of 19 wild turkeys at Hackberry Headquarters. has not experienced any mortality since November when one sick bird was dispatched. This flock travels approximately 2 miles west of Headquarters. onto private land to feed on an open meadow with wintering livestock. It would appear that they would be vulnerable to increased predation.

e. Rodents

A fox squirrel has wintered at Hackberry Headquarters--the first for several years.

11. Fishery Resources

Northern pike spawning activities were completed during the month.

Northern pike, from Pelican Lake, were stocked into Hackberry Lake to increase the pike population and predation pressure on the small, but expanding, carp population in Hackberry Lake.

Nine adult carp were captured in Pelican Lake during the northern pike spawning activities.

Fishery Resources: Considerable numbers of young-of-the-year carp and bass were observed below the Dewey Lake water control structure on the Clear Lake side during the month.

15. Animal Control

Nest predator control activities directed primarily toward raccoon and skunk were initiated on Valentine NWR during the month. Coop Student Sanchez? was provided with introductory exposure to trapping techniques. During the month 4 raccoons, 2 skunks and 1 coyote were removed. Coyote sign is virtually everywhere; however, force-account control will not be initiated until after aerial hunting is completed.

APHIS-ADC personnel carried out aerial coyote hunting activities during the month. Weather conditions were not favorable; however, a total of 36 coyotes were taken in and adjacent to the Marsh Lakes area. Coyote sign was observed in the Marsh Lakes area within two days after the follow up hunt was accomplished on March 27.

Force account control of the smaller mammalian nest predators in and adjacent to the Marsh Lakes resulted in 9 skunks, 15 raccoons and 1 long-tailed weasel being removed - bringing the total removed to 18 skunks, 15 raccoons and 1 weasel. Only 6 skunks and 2 raccoons have actually been removed within the Marsh Lakes area.

During the month 3 raccoons, 1 badger and 1 weasel were removed - 2 of the raccoons were outside of the Marsh Lakes Predation Control Area. With warmer weather and the seemingly poor trapping success using fish for bait, we switched to a combination of peanut butter, honey and flour (for bulk). It appears that the change in bait should have been initiated earlier - raccoons seem to like it.

Four raccoons were removed from the Marsh Lakes Predation Control Area along with four long-tailed weasels. Also, a coyote left a toe in a leg-hold trap. Duck nest mortality was very low until the end of the month--then the bomb hit. Final results will be available in July.

Bullsnake trapping activities continued in H.U.21B and H.U.18C1, but numbers and size (age class) are low.

On June 17 a bullsnake was dispatched at Hackberry Headquarters that was in a nest cavity 35 ft. up in an elm tree attempting to catch young flickers. There was also a house wren in a second nest cavity within 10 ft. of the flicker nest site. The event was noticed when the adult flickers, house wrens, robins and grackles all "ganged-up" on the bullsnake.

17. Disease Prevention and Control

On July 16, sick cormorants and Franklin's gulls were collected on Middle Marsh Lakes and forwarded to the NWHL-Madison, WI. Mortality was documented in hatch-year cormorants just before flight stage.

Approximately, 80 cormorants were affected during the month--635 cormorants nests were inventoried in June. Biologist McDaniel coordinated with NG&P, FWE-Grand Island, Crescent Lake and LaCreek NWRs to identify other cormorant or pelican populations that may be subject to mortality--this information was forwarded to NWHL-Madison.

Cormorant mortality on the Marsh Lakes was minimal by the first of the month; and by the end of the month young cormorants had dispersed and mortality was no longer observed. Gross lesions indicating Newcastle's Disease was not apparent in the Valentine NWR samples submitted to NWLHC-Madison, WI. Viral analysis has not been completed to date. Biologist McDaniel coordinated with other Service installations and NG&P for NWLHC to document other populations at risk and mortality elsewhere in Nebraska.

Mortality from botulism was not observed on the Marsh Lakes during the year.

Two of 8 specimens submitted from Valentine NWR to NWHRC in Madison were diagnosed positive for salmonellosis. Virology is pending on two other specimens and a supplementary report will be issued only if those results alter the general diagnosis. The two Franklin's gulls submitted were unsuitable for examination--this is the second year in succession that Franklin's gulls were picked up in the field alive and submitted that were reported "unsuitable for examination."

H. PUBLIC USE

1. General

Visitation for the year is estimated at 10,775 use days. This is an increase over last year and is primarily due to an increase in the number of fishermen, especially in the winter. Twenty six counts were used to estimate the number of fishermen during the winter. Estimates of duck, deer, and grouse hunters were from surveys. Pheasant hunters, wildlife observers, and photographer numbers are a "best guess." Visitation for the past 6 years was: 1991 - 5,590; 1990 - 7,440; 1989 - 9,140; 1988 - 8,184; 1987 - 10,455; 1986 - 15,612.

Doug Chadwick visited both Ft. Niobrara and Valentine NWRs. He is a writer doing research for a National Geographic article on the natural history of the Great Plains.

The birding brochure for the Valentine area was completed. It was a joint project with North Central Audubon, the Fort Niobrara Natural History Assoc., and the refuge. The leaflet gives information on birding in the Sandhills and features LaCreek NWR, Fort Niobrara NWR, Valentine NWR, and McKelvie National Forest. Copies were sent to all areas and the Chamber of Commerce here in Valentine. They will use it to promote birding in the area.

Refuge Operations Specialist Lindvall gave a slide talk on Valentine and Ft. Niobrara Refuges to 15 members of the North Central Wiremans Association in O'Neil on January 13.

The 504 review of public use facilities for the Complex was completed. The estimated cost of making our programs and facilities accessible was \$391,000. Some of the smaller items can be done with present staff and funding but the larger projects will require additional staff and funds to be completed. Following our evaluation Carol Hunter from P.A.W. visited both Ft. Niobrara and Valentine NWRs to review needs and projects for accessibility identified under the 504 program. She came up with an estimate of \$28,568 to do the work. We used cost estimates from the Maintenance Management System Handbook and were under the assumption that all refuge public use programs would be made completely accessible and put up to standards outlined in the evaluation forms. P.A.W. used lower cost estimates and a more realistic approach that not all activities can or need be made accessible. Many projects would benefit both challenged and other visitors to the refuges.

The report on 504 activities was completed. Our accomplishments were construction of a wheel chair ramp at the canoe kiosk, changes in our hunting leaflet for Valentine NWR, and purchase of materials for a boardwalk.

The July issue of NEBRASKALAND MAGAZINE included an article by Gerry Steinauer with photographs by Jon Farrar on "Sandhills Fens". Featured was the fen in Dewey Marsh on Valentine NWR. A draft of this article was previously reviewed by Biologist McDaniel.

News releases were prepared and sent out to 31 local and area newspapers and radio stations. The local outlets, KVSH radio, Midland News, and the Valentine Newspaper used all releases. It is not known how many of the other outlets used them. News releases for 1992 were:

Valentine Refuge Fishing
Warning for Users of Pour on Insecticides
Applications Being Accepted for 1992 YCC Program
Grouse and Turkey Observation Blinds
Fisheries Management Seminar
Slot Limit to Remain for Pike on Pelican Lake
Book on History of Ft. Niobrara Published
Owls of the Prairie
Wildflower Beauty
Buffalo Tours
YCC Completes 17th Season
Prairie Dog Towns: A Different Type of Town
Fish and Wildlife Firefighters Dispatched to Fires in Idaho
Kid's Fishing Day
Buffalo and Longhorn Sale
Ft. Niobrara Bison and Longhorn Sale Held
Trapping on Valentine National Wildlife Refuge
New Manager Arrives at Ft. Niobrara and Valentine Refuges
Size Limits for Fishing on Valentine Refuge Lakes

2. Environmental Education - Students

Refuge Operations Specialist Lindvall gave a talk on bird feeding and identification to 35 4-H leaders on January 16. Each participant made a feeder to take home and competed in a bird identification contest with prints of birds offered as prizes. Brochures on feeding birds were also given out. The leaders then went out to spread the word to their respective groups.

ROPS Lindvall met with Tamara McKinney of the Nature Conservancy concerning environmental education. TNC is planning on doing some e.e. programs at their Niobrara Valley Preserve. They had set up a overnight programs for high school students by years end.

Wildlife Week programs were presented to 800 rural and city school children on April 9 as part of the Earth Day sponsored by the American Association of University Women. This year's theme was endangered species. All students were shown the slide show from the National Wildlife Federation on wildlife trade. The students then broke up into smaller groups and were shown examples of products made from endangered species. Carol Garret in the RO was a big help in getting the slide show and specimens for us. The students really liked the wildlife products. Other presenters at Earth Day were TNC, SCS, Natural Resource District, AAUW on recycling, and the City of Valentine on waste treatment.

On June 4 and 5 John Segar and Bill Langier taught courses at the Sandhills Extension 4-H Camp at Halsey National Forest. A wildlife/wildfire presentation and demonstration was given to the 4-H groups. The wildlife section stressed basic requirements of wildlife and why wildlife management is important. Wildlife management for big game was discussed and a hands on population game run. The fire section demonstrated equipment and techniques

Sinte Galeska College in Rosebud, SD contacted us and requested help in teaching classes in wildlife management. We responded and offered help in teaching fire, big game, waterfowl, and grassland management courses.

6. Interpretive Exhibits/Demonstrations

The refuge had a booth at the Cherry Count Fair from August 20-23. Student Trainee Ronnie Sanchez designed and staffed the booth.

The Fish and Wildlife Service had a booth at the State Fair for the first time this year. This office coordinated the effort to staff and decorate the booth in the Outdoor Alley at the fairgrounds. We had the booth for the second half of the fair, Sept. 9-13. It was a good opportunity to contact the public and inform them of FWS activities in Nebraska. Rainwater Basin WMD, Crescent Lake NWR, and Grand Island Enhancement helped staff the exhibit.

We received a fishing line recycling display from Berkley which we took into a local sporting goods store and set up.

We loaned our display on the use of goats for leafy spurge control to the Cashmere Producers of America to set up at their annual convention held at Texas A and M in October.

8. Hunting

Waterfowl hunting is permitted on Watts, Rice, and Duck Lakes. Seasons and limits are the same as for the state. Duck season opened on October 17 and 6 groups hunted at Valentine NWR. The first split of the season continued through November 24 but the duck season was over when lakes froze over at the end of October. The second split ran from December 23 - January 3 but no ducks were in the area. An estimated 70 hunter visits were made for waterfowl hunting. With the change to a later opening date there is only limited opportunity to hunt ducks in the Sandhills.

Pheasant hunting opened in Nebraska on November 7 with 33 hunters checked on Valentine NWR. The hunters had bagged only 7 birds when checked. Pheasant numbers on the refuge and all across Nebraska were down. The season continued through January 31, 1993 with a bag limit of 3. No counts, other than on the opener, are made. A best guess of 200 hunter visits is made.

The 1992 prairie grouse season ran from September 12 through November 30 with a three bird limit. Hunter harvest is documented with voluntary wing collection boxes run in cooperation with Nebraska Game and Parks. During 1992 a total of 442 prairie grouse were reported harvested by 348 hunters - 1.3 birds harvested/hunter day. Sharptails comprised 80% and prairie chickens 20% of the harvest. The juvenile to adult ratio was 1.6 for sharptails and .8 for prairie chicken. Both the birds per day and the juvenile/adult ratio are down from the last few years. The number of hunter visits was however up slightly.

The rifle deer season ran from November 14-22. Hunters took

88 deer (79 whitetail and 9 mule deer) during the season. This is down from the past 4 years. More information on past harvest is found in section G.8 of this report. Records from state check stations show a 51 percent success rate for Calamus West and 77 percent for the Sandhills unit. It is also possible for a hunter to get 2 permits and many do. Most of the hunting pressure on the refuge is on opening week. This year refuge officers recorded 159 individual permits (many hunters have 2 permits) during the season. Vehicle license numbers were obtained from 33 motor vehicles from which no permits were obtained. These figures are used to get an estimated 200 hunters for the year. Assuming the average hunter hunts 3 days this figures out to 600 hunter days for rifle season.

Muzzle loader deer season ran from December 5-20. Two deer were known to have been harvested on the refuge. Nebraska is new to a muzzle loading deer season but there seems to be more interest every year.

The Valentine NWR coyote hunting season started on December 1, 1991 and ended on March 15, 1992. Seventy three permits were issued and 38 were returned. Eighteen coyotes were reported taken. It is felt that quite a few people got a permit but did not hunt and that people who were successful are more likely to return their permit. The permit is a postage paid postcard with a space for recording harvest.

The refuge is open to both archery deer hunting and dove hunting but few people visit for these activities. No deer were known taken during archery season. A few doves are shot by people out grouse hunting.

The Valentine NWR hunting leaflet was reprinted and a section on special access added to allow hunters unable to hunt in a normal manner to shoot off sand trails on the refuge. Nebraska Game and Parks issues permits that allows such hunters to shoot from a vehicle. With the change in our brochure such hunters, with a Nebraska permit, to shoot from our trails. This will provide some access for deer, grouse, and pheasant hunting.

9. Fishing

Fishing, especially through the ice, accounts for most of the visits to the refuge. In 1992 an estimated 7,500 visits were made for fishing. This is based on 26 counts of fishermen on the lakes. Most counts were conducted in the winter. This year we had ice during January, half of February and again in late November and December. Fishing pressure increased this year from last and was due somewhat to the special slot limit on Pelican Lake which attracted many. Estimated fishing visits for the past few years are 1991 - 3,300; 1990 - 4,800; 1989 - 7,700.

Refuge specific regulations for the year were: bass - 15 inch minimum on all lakes except Watts which was catch and release; northern pike 36 inch minimum on all lakes except Pelican; slot limit 24-26 inches on Pelican Lake; muskie - catch and release on Watts.

A fishery management seminar was held in Valentine on April 30. Wayne Stancell from

Fishery Assistance and Lyn Schleuter from Game and Parks presented information on fishery management in the area to 15 interested anglers. The main emphasis was on our use of northern pike as a predator to control carp. Size limits have been used to reduce harvest of pike. The scheme has worked but has drawn criticism from panfishermen who feel the pike impact bluegill and perch and some pike fishermen who want to take home fish.

When the slot limit was put into effect on January 2 we started a check station to log in fish taken out of Pelican Lake. The check station ran through January by which time 357 pike had been counted. We had anticipated a much higher catch rate. The check station was very time consuming and was discontinued and the slot limit extended through the end of the year. One amazing thing was the number of people who would bring a fish outside the legal limit into the station. The other thing we learned was that the fishermen liked the slot because it allowed them to take some fish home and do some catch and release fishing also.

Spring and fall also attracted quite a few more fishermen this year. The high count recorded was 165 fishermen on May 23. Most were fishing for pike either on the slot limit on Pelican or catch and release on the other lakes. Pike up to 42 inches were caught. One person also caught a 44 inch muskie on Watts. Other highlights for the year were excellent perch fishing on Dewey in late summer and some very large bluegill taken out of Pelican including one weighing 2 pounds 5 ounces.

Information was provided to the Bass Federation for their 1992 guide to bass fishing in Nebraska. The Valentine NWR lakes are noted for good bass fishing.

10. Trapping

A trapper and partner trapped for the 91 - 92 season. Catch was 2 beaver, 2 badger, 11 raccoon, 14 muskrat, 5 coyote, and 3 rabbits. There were no other applicants this year so the two trappers were allowed to trap all open areas on the refuge.

11. Wildlife Observation

Blinds were placed on both sharptail and prairie chicken leks at Valentine NWR. The blinds were reserved for almost every weekend and quite a few weekdays also. People have travelled from Oregon, Illinois, Wisconsin, and Colorado to see the show.

North Central Audubon toured both Ft. Niobrara and Valentine NWRs as part of their spring bird watching trip to the Sandhills. This is the first trip offered and was well received. They saw 76 species on the 2 day birding trip. A reporter from the Omaha World Herald was one of the participants and wrote a nice article on the trip and refuges. The package deal included guides, food, lodging, and transportation.

No counts were made for wildlife observers but an estimate of 1,200 is made. Visitors in this category seem to be increasing every year.

17. Law Enforcement

The annual fall LE Refresher was held on September 2 and 3. Refuge officers from LaCreek, Crescent Lake, Rainwater Basin, and the Ft. Niobrara-Valentine Complex attended. Ted Blume from Game and Parks gave an update on state laws, Mark Lindvall did a session on the Proceedings of the International Conference on Improving Hunter Compliance with Wildlife Laws, Cleve Vaughn updated us on Nebraska procedures, and a U.S. Marshal gave a talk on arrest procedures. Firearms Qualifications for pistol, shotgun, and rifle were done by Steve Knode and Royce Huber.

Refuge Officers Ellis, Sellers, Kime, Vaughn, and Lindvall had the required physicals and attended the 40 hour LE Refresher held in Marrana, AZ. Several officers signed on for the time share for exercise but mostly ended up doing it all on personal time. Wildlife Biologist Kathy McPeak gave up her law enforcement credentials during the year. With the emphasis on reducing the number of refuge officers, Fire Management Officer John Segar, who has completed training and was scheduled for LE authority, will not be getting law enforcement credentials.

A kiosk display at Valentine NWR was destroyed by someone who stole the plexiglass covering. We replaced the plexiglass and it was stolen within a week. We replaced it again and it was still there at the end of the year.

Steve Spomer, a technician at the University of Nebraska - Lincoln, has been charged with illegally collecting butterflies on Valentine NWR by Special Agent Vaughn.

Thirteen tickets were written by refuge officers during 1992 and are listed below. All cases were run through Central Violations Bureau this year. There were no cases pending from 1991.

Citations issued by refuge officers in 1992.

Violation	Date	Fine	Disposition
size limit-fish	01/09/92	\$50	paid
size limit-fish	01/09/92	\$50	paid
size limit-fish	01/14/92	\$50	paid
size limit-fish	01/29/92	\$50	paid
size limit-fish	05/11/92	\$50	paid
drive on closed trail	05/07/92	\$50	paid
size limit-fish	05/11/92	\$50	paid
size limit-fish	05/24/92	\$50	paid
hunting in closed area	11/14/92	\$50	paid
possession of rifle without valid deer permit	11/14/92	\$50	paid
hunting in closed area	11/14/92	\$50	paid
driving on closed trail	11/15/92	\$50	paid
hunting in closed area	11/16/92	\$50	paid

I. EQUIPMENT AND FACILITIES

2. Rehabilitation

a. Buildings

The Hackberry Quonset wiring was rehabilitated force account with all wiring brought up to code and lighting installed.

At Quarters 13 at Pelican Lake, force account rewiring and modification of the controls on the sewage lift station were initiated in an attempt to resolve freeze up problems.

The siding project on Ft. Niobrara NWR Quarters #2 was virtually complete with the exterior lights reinstalled. Repair and or replacement of door bells and realignment of lighting ground cables is the only work remaining on the house.

Valentine NWR Quarters #13 (Pelican Lake) light fixtures have been replaced and all wiring problem identified previously have been resolved.

3. Major Maintenance.

A. Facilities Maintenance

Rewiring of Hackberry Headquarters Office was completed to bring protected circuits and several lines up to code.

Facilities Maintenance: The rehabilitation of electrical service of the outbuildings at Q-13, Pelican Lake were completed. The cost was approximately \$460 for materials and equipment rental. The meter was replaced with cut-off and distribution box installed by KBR Rural Public Power. A new pad for the propane tank was poured.

A total of approximately 2.5 miles of roads and 4 parking areas in public use/fishing areas were hayed, using bale mulcher on the Valentine NWR. Good access was attained on 80% of the roads; virtually all problems occurred when using hay over 1 year old - bales in deteriorated condition.

4. Equipment Utilization and Replacement

Two new 1992 Dodge Power Ram W250, 3/4 ton pickups were received at the Ft. Niobrara NWR headquarters on January 13, 1992. These two pickups were then retro-fitted with headache racks, side and pumper mounts, fabricated by D&W Machine & MFG, tie downs, bumper reinforcements,

and trailer brakes and wiring. Both units will be on line as soon as vehicle radio installation and programming are complete.

The Cat 12 grader on Valentine Refuge was set up[for all-weather use with installation of the cab from the old Huber Warco grader.

Installation/retrofit of air compressor systems in the complex was fully operation in the Ft. Niobrara and Hackberry shops. Upgrade of fittings, safety valves and couplings were to ASME standards.

The transmission went out on the 1979 CJ-7 Jeep and had to be repaired on January 17, 1992.

The new Panther (265 H.P. Lycoming engine) airboat was received during the month. The new boat, with a tilt trailer, can be unloaded by one 'ole biologist rather than requiring the assistance of 2-3 young temporaries. The six cylinder engine also runs smoother than the old four cylinder and also isn't quite as noisy.

The new Caterpillar excavator was delivered to Ft. Niobrara NWR and stored at the Ft. Niobrara NWR headquarters until able to move. Work on hand for the new machine includes completion of water control structure rehab on Valentine NWR and replacement of bridges at Ft. Niobrara NWR.

A portable generator was picked up on surplus from the South Dakota National Guard. The generator will provide emergency power for the Pony Lake Sub-headquarters.

All mills on Valentine refuge were visited and serviced, with deficiencies corrected or noted for future rehabilitation. Support braces and platforms developed to fit Aero motor towers were modified to be self supporting, facilitating one-man installation. All replacement platforms fabricated have been installed; 2 or 3 more will be needed.

All surplus vehicles identified for disposal were hauled into Ft. Niobrara's sales line up. Vehicles include: Jeeps - CJ5 Military and parts CJ5 buffalo jeep, M38 military, M38 military body and parts, M38A military; Station Wagon - Volare; Truck - Tan Dodge cab and chassis, Chevy and Dodge pickups previously placed on GSA sale.

The broken cab-guard on the GMC dump truck on Valentine has been repaired and made legal for Dave's CDL exam. Numerous welds and repairs to the bed and cab shield remain. Secured storage for jack, flares, etc., need to be developed. Most modifications and repairs have been completed on the GMC semi-tractor/trailer to bring the unit up to DOT regulations. The leaky control valve on the backhoe has been repaired.

J. Other ITEMS

4. Credits

Sections C-1, F-7,10,13 and all of H were written by Mark Lindvall in 1992. This rest of the report was written in 2003 by Mark Lindvall using monthly activity reports prepared in 1992.

TOWER WILDLIFE MANAGEMENT AREA Brown County, Nebraska

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INTRODUCTION

The Tower Wildlife Management Area is located 13 miles south of Ainsworth, Nebraska in Brown County. The 480 acre property had a conservation easement place on it on July 15, 1988 under the Consolidated Farm and Rural Development Act and Section 1314 of the Food Security Act. On September 30, 1991 the property was transferred from the Farmers Home Administration to the US Fish and Wildlife Service in fee title. The land is an excellent area for wildlife. About half the area is wetland and most of the remainder sub-irrigated meadow. A small portion is sandhills. Waterfowl, shorebirds, raptors, prairie grouse, and songbirds are all abundant. Surrounding lands are all in pasture. In 1991 a water control structure was installed in a ditch dug by previous owners. This structure increased the amount of wetland on the property substantially by restoring the area to a more natural state. The land on the property and surrounding area is beginning to heal from past abuse. The sandy soils were plowed, pivots installed, and an attempt made to grow corn.

Note: the name was changed to Yellowthroat WMA in later years

C. LAND ACQUISITION

2. Easements

FmHA still holds surrounding land in inventory and a further review was required under the new Farm Bill. At a meeting with the local FmHA staff an addition of 400 acres adjacent to our fee title land was discussed. This is contingent upon approval from the State Office to change some of the land classification from cropland to pasture land. The soils are all sand and should have never seen the plow in the first place. We had not heard back from the State Office at years end. Also pending is the access easement to our fee title land. This was not completed when the transfer was done. We have requested that the public also be allowed access to the wildlife management area.

E. ADMINISTRATION

1. Personnel

The Tower Wildlife Management Area is managed from the Fort Niobrara-Valentine NWR Complex located in Valentine, Nebraska.

8. Other

FmHA paid the taxes on the property for 1991. The Fish and Wildlife Service will pay from the Refuge Revenue Sharing Fund starting in FY 92.

F. HABITAT MANAGEMENT

1. Wetlands

The property has excellent wetlands which were restored with the addition of the water control structure in 1991. Of interest is that the water control structure not only affected the one large wetland behind it but also apparently restored the water table in areas away from the main wetland. Several wetlands nearby filled along with the one behind the structure. These had been dry or nearly dry for several years.

Water levels have been monitored using a guage on the water control structure. The 1991 Fort Niobrara NWR narrative has a history of water levels. In 1992 dates and water levels were 27 February 7.0; 7 May 8.8; 13 May 8.6; 19 June 8.75; 10 July 8.6; 24 October 8.6.

5. Grasslands

The grasslands on the area and on the adjacent FmHA inventory land are in poor condition. The

area was formerly planted to corn followed by a cover crop of rye. Grasses are coming back in some areas but there is still quite a bit of volunteer rye present.

10. Pest Control

Small areas of both Canada thistle and leafy spurge are present on the property. The spurge is found mainly in an old tree lot and covers a 300 by 150 foot area. Several other very small patches are also present. All spurge was hand cut with weed whips on three occasions. This prevented seeding and stressed plants but is very time consuming. One small area was also covered with black plastic. Three areas of about 300 square feet each have Canada thistle. These areas were also hand cut which prevented seeding.

Some thistle plants examined were found to have both stem borers and seed head weevils present.

H. PUBLIC USE

8. Hunting

Waterfowl, pheasant, grouse, and deer hunting take place on the property but no counts were made of hunters or harvest.

9. Fishing

According to a local source the large wetland on the east end of the property has good numbers of bass, perch, bluegill, and crappie. Some fishing does take place on the property.

J. OTHER ITEMS

4. Credits

Refuge Operations Specialist Lindvall wrote all sections.